Table I. LIMGR Level 4 Modifications.

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
S-DMS-00010	8334	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall provide capabilities to search and obtain data by science discipline.
S-DMS-00030	8336	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall <u>access the Data Dictionary to obtain the collection's attributes accessible through the underlying Data Servers and Gateways.</u>~~create an integrated schema from the exported schematas of the Data Servers.~~
S-DMS-00040	8337	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall determine which Data Servers<u> and Gateways</u> are required in order to ~~perform~~<u>satisfy</u> a ~~S~~<u>s</u>earch ~~R~~<u>r</u>equest and build a Site Query Plan as a result.
S-DMS-00050	12292	B1	functional	incremental	test	unverified	The LIMGR CI shall <u>accept service requests for services available at the underlying Data Servers and Gateways.</u>~~initiate data provider data access and manipulation~~

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
							~~operations.~~
S-DMS-00060	8339	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall provide the capability to establish a session as the context for a series of ~~Service~~ ~~R~~requests.
S-DMS-00070	8340	B1	functional	incremental	test	unverified	The LIMGR CI shall provide the capability to suspend an ongoing ~~t~~ session~~-~~.
S-DMS-00090	8342	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall provide the capability to terminate an established client session.
S-DMS-00100	8343	~~B0~~ B1	interface	incremental	test	unverified	The LIMGR CI shall merge the~~accept~~ search results from ~~a~~multiple Data Server~~s or~~ Gateways into a single result set.~~, and provide capability, to integrate Search Results from a previous Search Request .~~
S-DMS-00110	8344	B1	functional	incremental	test	unverified	The LIMGR CI shall provide the capability to save the result of a ~~Service~~ search ~~R~~request for later reuse.
S-DMS-	8350	~~B0~~	functional	incremental	test	unverified	The LIMGR CI shall

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
00180		~~B1~~					support interactive information management capabilities for administrators to retrieve information.
S-DMS-00190	8351	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall use the identification of the user on whose behalf a Service Request is issued as the basis for access control decisions.
S-DMS-00200	8352	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall forward to Data Servers and Gateways the identification of the user on whose behalf a ~~S~~service ~~R~~request is being executed.~~issued to Data Servers for Service Requests issued on the behalf of the user.~~
S-DMS-00210	12295	B1	functional	incremental	test	unverified	The LIMGR CI internal data base management queries to the DDICT CI shall be expressed in SQL.~~a structured query language~~
S-DMS-00220	8354	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall store, maintain and

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
							provide data management services for ECS local Schema.
S-DMS-00230	8355	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall provide the capability to ~~integrate~~<u>return</u> partial results ~~within those~~<u>from</u> Data Servers <u>and Gateways in the event of an error within the underlying data providers.</u>~~represented in its local Schema.~~
S-DMS-00240	8356	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	~~In the case of processing failures, upon restart t~~<u>T</u>he LIMGR CI shall complete all incomplete transactions <u>upon restart of the LIMGR after a processing failure.</u>~~without loss of data.~~
S-DMS-00250	12296	B1	functional	incremental	test	unverified	The LIMGR CI shall ~~maintain query~~<u>log events for MSS upon receipt and completion of search requests.</u>~~files.~~
S-DMS-00260	12297	B1	functional	incremental	test	unverified	The LIMGR CI shall provide a capability <u>for its clients to obtain the</u>

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
							status of a query or a search request. ~~to report status of Service Requests submitted to it.~~
S-DMS-00280	8360	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall provide a data administration utility for adding, deleting, modifying, and expanding individual Schema.
S-DMS-00290	8361	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall accept Service Requests, and provide capability, to find and retrieve a Schema entry from an integrated Schema.
S-DMS-00300	8362	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall provide the capability to return, as a result of a search request, ~~search for D~~data ~~G~~granules ~~of EOSDIS data~~ stored in the underlying~~for all~~ Data Servers. ~~represented in their local Schema.~~
S-DMS-00470	8363	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall support the interruption of any database administrative or

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
							maintenance activity and its restart without loss of information.
S-DMS-00520	9615	~~B0~~ B1	interface	<u>approved</u>	test	unverified	The LIMGR CI shall send detected hardware and software fault information to MSS.
S-DMS-00530	9630	~~B0~~ B1	interface	incremental	test	unverified	The LIMGR CI shall collect Security Management Data (such as rejected access to a service) and provide it to the MSS.
S-DMS-00540	8369	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI data accesses shall be subject to read access controls based on data types, user privileges, and data ownership.
S-DMS-00550	8370	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall provide a capability to decompose the Search Requests it receives into executable data base Queries.
S-DMS-00605	9705	~~B0~~ B1	functional	<u>approved</u>	test	unverified	The LIMGR CI shall provide <u>daily</u> operations<u>information to MSS.</u>~~staff with the capability to generate daily LIMGR operations summary reports.~~

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
S-DMS-00606	9706	~~B0~~ <u>B1</u>	functional	<u>approved</u>	test	unverified	The LIMGR CI shall provide operations staff with the capability to generate LIMGR performance summary reports.
S-DMS-00690	9618	~~B0~~ <u>B1</u>	interface	incremental	test	unverified	The LIMGR CI shall <u>log</u>~~provide~~ configuration management data <u>for MSS.</u>~~such as software versions to MSS through the use of managed process framework.~~
S-DMS-00700	9622	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall <u>log</u>~~support the MSS in collecting A~~<u>a</u>ccounting ~~M~~<u>m</u>anagement ~~D~~<u>d</u>ata <u>for MSS.</u>~~by supplying resource utilization data.~~
S-DMS-00710	9608	~~B0~~ <u>B1</u>	interface	incremental	test	unverified	The LIMGR CI shall report Accountability Management Data (requests such as searches, browse requests, orders) to the MSS.
S-DMS-00720	9626	~~B0~~ <u>B1</u>	interface	incremental	test	unverified	The LIMGR CI shall collect Performance Management Data using the MSS

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
							managed object components and provide it to the MSS at configurable intervals and on demand.
S-DMS-00740	9607	B1	functional	incremental	test	unverified	~~P~~The LIMGR CI shall provide partial results ~~upon request which consists~~consisting of the results~~from the start of the request or~~since the last request for results or from the start of the request.
S-DMS-00750	8391	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall have the capability of creating, editing and deleting advertisements about itself and submitting them to the Advertising Service.
S-DMS-00860	8392	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall provide a capability to report the status of sessions established by it.
S-DMS-00870	2944	~~C~~ B1	functional	approved	demo	unverified	The LIMGR CI shall automatically suspend sessions that have been inactive for more than the "time-out" period.~~a specified time.~~

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
S-DMS-00890	8393	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall support multiple concurrent sessions.
S-DMS-00895	8394	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall support multiple service requests within a session.
S-DMS-00900	8395	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall provide an application program interface for the submission of Service Requests.
S-DMS-00910	8396	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall provide an application program interface for the submission of requests for administrative services.
S-DMS-00912	9654	~~B0~~ <u>B1</u>	interface	<u>approved</u>	test	unverified	The LIMGR CI shall log the startup of the LIMGR servers to MSS.
S-DMS-00913	9655	~~B0~~ <u>B1</u>	interface	<u>approved</u>	test	unverified	The LIMGR CI shall log the shutdown of the LIMGR servers to MSS.
S-DMS-00915	8397	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall log the initiation of a session.
S-DMS-00920	8398	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall log the termination of a session.
S-DMS-	2947	~~C~~	<u>functional</u>	<u>approved</u>	<u>demo</u>	<u>unverified</u>	The LIMGR CI shall

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
00950		~~B1~~					provide the capability for the operations staff to specify a "time-out" period for inactive sessions.
S-DMS-00990	8404	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall send ~~N~~<u>n</u>otifications to users<u>,</u> via email<u>,</u> in the event that a ~~users'~~<u>user's</u> request or session is canceled by operations staff.
S-DMS-01000	8405	~~B0~~ <u>B1</u>	functional	incremental	test	unverified	The LIMGR CI shall provide the capability to restore a session after interruption.
S-DMS-01010	9652	~~B0~~ <u>B1</u>	interface	incremental	test	unverified	The LIMGR CI shall log to MSS all Service requests initiated during a session.
S-DMS-01011	9656	~~B0~~ <u>B1</u>	interface	<u>approved</u>	test	unverified	The LIMGR CI shall log to MSS when a service request is activated from the queue.
S-DMS-01012	9657	~~B0~~ <u>B1</u>	interface	<u>approved</u>	test	unverified	The LIMGR CI shall log to MSS when a service request has been successfully decomposed into its component requests.
S-DMS-01013	12303	B1	interface	<u>approved</u>	test	unverified	The LIMGR CI shall log ~~to~~<u>for</u> MSS when

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
							the component service request has been submitted to the data provider.external entity (e.g., GTWAY, SDSRV, or ASTER).
S-DMS-01015	9660	B0 B1	interface	approved	test	unverified	The LIMGR CI shall log to MSS when the results of the external requests have been integrated and status is about to be sent to the client program.
S-DMS-01017	9653	B0 B1	interface	approved	test	unverified	The LIMGR CI shall log the successfull completion of each servicerequest tofor MSS.
S-DMS-01020	8407	B1	functional	incremental	test	unverified	The LIMGR CI shall log the suspension of processing of Servicerequests for MSS.
S-DMS-01040	8409	B0 B1	functional	incremental	test	unverified	The LIMGR CI shall log the termination of servicerequests for MSS.
S-DMS-01050	8410	B0 B1	functional	incremental	test	unverified	The LIMGR CI shall ensure that databases which are distributed and replicated provide synchronized data.
S-DMS-	8411	B0	functional	incremental	test	unverified	The LIMGR CI shall

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
01060		~~B0~~ B1					forward commands to terminate a session to all servers which are a part of that session.
S-DMS-01070	8412	~~B0~~ B1	functional	incremental	test	unverified	The LIMGR CI shall accept Subscriptions for LIM data.
S-DMS-01075	8413	~~B0~~ B1	interface	incremental	test	unverified	The LIMGR CI shall accept and process life-cycle commands from the MSS.
S-DMS-01090	9875	~~B0~~ B1	functional	approved	test	unverified	LIMGR CI mode-specific applications shall access data only for the mode in which the application is configured.
S-DMS-01091	9876	~~B0~~ B1	functional	approved	test	unverified	The LIMGR CI shall include the mode identifier in activity log record entries for cost and accounting data.
S-DMS-01094	9877	~~B0~~ B1	functional	approved	test	unverified	LIMGR CI mode-specific applications shall be capable of simultaneous execution in different modes on the same machine.
S-DMS-01095	9878	~~B0~~ B1	functional	approved	test	unverified	LIMGR CI mode-specific applications shall be capable of simultaneous execution

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
							in different modes on different machines.
S-DMS-01096	9879	~~B0~~ B1	functional	approved	test	unverified	LIMGR CI server applications shall register within their mode-associated namespace in the CSS name service.
S-DMS-01097	9880	~~B0~~ B1	functional	approved	test	unverified	LIMGR CI client applications shall incorporate a mode identifier for CSS name service lookups.
S-DMS-01098	9881	~~B0~~ B1	functional	approved	test	unverified	The LIMGR CI be capable of using simulated time values supplied by CSS when executing in a non-production mode.
S-DMS-01099	9882	~~B0~~ B1	functional	approved	test	unverified	LIMGR CI mode-specific executables and scripts shall accept a specific mode only at startup.

Table II. LIMGR Level 4 Deletions.

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
~~S-DMS-00270~~	~~8359~~	~~B0~~	~~functional~~	~~incremental~~	~~test~~	~~unverified~~	~~The LIMGR CI shall support revisions of its local Schema following Schema changes in the Data Servers represented in the LIMs local Schema.~~
~~S-DMS-00800~~	~~2928~~	~~C~~	~~functional~~	~~incremental~~	~~demo~~	~~unverified~~	~~The LIMGR CI shall be able to provide notification of events associated with sessions which require additional instructions, e.g., when requests exceed a specified threshold.~~
~~S-DMS-00805~~	~~2929~~	~~C~~	~~functional~~	~~incremental~~	~~demo~~	~~unverified~~	~~The LIMGR CI shall be able to provide notification of events associated with Service requests which require additional instructions, e.g., when resources for a request exceed a specified threshold.~~
~~S-DMS-00810~~	~~2931~~	~~C~~	~~functional~~	~~incremental~~	~~demo~~	~~unverified~~	~~The LIMGR CI shall provide an entry point to be used to respond to notifications of events which require instructions to be returned to the LIM CI.~~
~~S-DMS-00820~~	~~2930~~	~~C~~	~~functional~~	~~incremental~~	~~demo~~	~~unverified~~	~~The LIMGR CI shall provide the capability to accept nand utilize the entry point to be used for asynchronous notification in asynchronous Service Requests.~~
~~S-DMS-00830~~	~~2932~~	~~C~~	~~functional~~	~~incremental~~	~~demo~~	~~unverified~~	~~The LIMGR CI shall provide the capability to disable~~

							~~asynchronous notifications and provide default instructions for such notification events.~~
~~S-DMS-00840~~	~~2933~~	~~C~~	~~functional~~	~~incremental~~	~~demo~~	~~unverified~~	~~The LIMGR CI shall be able to accept notifications of events associated with Service Requests it issued to other services.~~
~~S-DMS-00845~~	~~2934~~	~~C~~	~~functional~~	~~incremental~~	~~demo~~	~~unverified~~	~~The LIMGR CI shall be able to accept notifications of events associated with sessions it has with other services.~~
~~S-DMS-00850~~	~~2935~~	~~C~~	~~functional~~	~~incremental~~	~~demo~~	~~unverified~~	~~The LIMGR CI shall provide the capability to accept instructions associated with responses to notifications of events.~~

Table III. LIMGR Level 4 Additions.

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	text
S-DMS-00265	NEW	B1	functional	incremental	test	unverified	The LIMGR CI shall submit subscriptions to the subscription server in order to receive notifications of new Data Collections.
S-DMS-00275	NEW	B1	functional	incremental	test	unverified	The LIMGR CI shall incorporate changes in the Data Dictionary upon notification from the subscription server.
S-DMS-00320	NEW	B1	functional	incremental	test	unverified	The LIMGR CI shall receive document search requests from the WKBCH CI.

S-DMS-00325	NEW	B1	functional	incremental	test	unverified	The LIMGR CI shall send document search requests to the appropriate Data Servers and Gateways.
S-DMS-00330	NEW	B1	functional	incremental	test	unverified	The LIMGR CI shall automatically suspend all active sessions when the connections to active clients are lost.
S-DMS-00340	NEW	B1	functional	incremental	test	unverified	The LIMGR CI shall submit orders for ECS standard Product software to the SDSRV CI.
S-DMS-00350	NEW	B1	functional	incremental	test	unverified	The LIMGR CI shall support inventory searches based on any combination of core and product specific metadata defined in their scope based on the DDICT configuration.

Table IV. DMS L4 requirement link additions to IMS RBRs.

RbR_ID	L4_ID
EOSD2620#B	S-DMS-00330
IMS-0100#B	S-DMS-00080
IMS-0100#B	S-DMS-00070
IMS-0100#B	S-DMS-00090
IMS-0190#B	S-DMS-00110
IMS-0220#B	S-DMS-00275
IMS-0390#B	S-DMS-00265
IMS-0415#B	S-DMS-00320
IMS-0500#B	S-DMS-00320
IMS-0530#B	S-DMS-00320
IMS-0530#B	S-DMS-00325
IMS-0550#B	S-DMS-00320
IMS-0550#B	S-DMS-00325
IMS-0550#B	S-DMS-00100
IMS-0575#B	S-DMS-00100
IMS-0600#B	S-DMS-00010
IMS-0625#B	S-DMS-00325
IMS-0660#B	S-DMS-00350
IMS-0750#B	S-DMS-00340

Table V. DMS L4 requirement link deletions to IMS RBRs.

RBR_ID	L4_ID
IMS-0030#B	S-DMS-00010
IMS-0250#B	S-DMS-00270
IMS-0560#B	S-DMS-00070
IMS-0560#B	S-DMS-00080

RBR_ID	L4_ID
~~IMS-0560#B~~	~~S-DMS-00090~~
~~IMS-0560#B~~	~~S-DMS-00100~~
~~IMS-0560#B~~	~~S-DMS-00110~~

Table VI. IMS RBR Modifications.

RBR_id	req_key	Rel	Req_Category	segment	req_type	s_verif_method	s_verif_stat	a_verif_method	a_verif_stat	text	interpretation text	clarification
IMS-0750#B	8840	~~B0~~ B0B1	mission fulfillment	SDPS	functional	demo	un-verified	demo	un-verified	The IMS shall provide the capability for the user to order Standard Product software and associated documentation in accordance with EOSDIS distribution criteria.	Ordering is done by Product Request.	B0 supports the Motif BOSOT client while B1 additionally supports the web client.
IMS-1490#B	8633	~~B0~~ B0B1	mission essential	SDPS	functional	test	un-verified	test	un-verified	The IMS toolkit software shall provide users, including those working from ICCs and ISTs, with the capability to locally construct the requests for IMS services, forward the requests to the IMS server, and obtain request results.		ISTs and ICCs are done by Rel B. B0 supports the Motif BOSOT client while B1 additionally supports the web client.